



OIL ANALYSIS REPORT

| | |
|-----------------|------------------|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | ATTENTION |

Area
GUAY SON [CONHER]
Machine Id
IBACO BM ISMAR 6
Component
Diesel Engine
Fluid
RALOY 15W40 (160 LTR)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. (Customer Sample Comment: Fluid: Raloy 15W40)

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | KL0014187 | KL0014125 | KL0013345 |
| Sample Date | | Client Info | | 20 Mar 2024 | 06 Feb 2024 | 21 Oct 2023 |
| Machine Age | hrs | Client Info | | 0 | 14677 | 14208 |
| Oil Age | hrs | Client Info | | 534 | 155 | 476 |
| Filter Age | hrs | Client Info | | 534 | 155 | 476 |
| Oil Changed | | Client Info | | Not Chngd | Not Chngd | Changed |
| Filter Changed | | Client Info | | Not Chngd | Not Chngd | Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 8 | 2 | 24 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 2 | 1 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 2 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 2 | 153 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

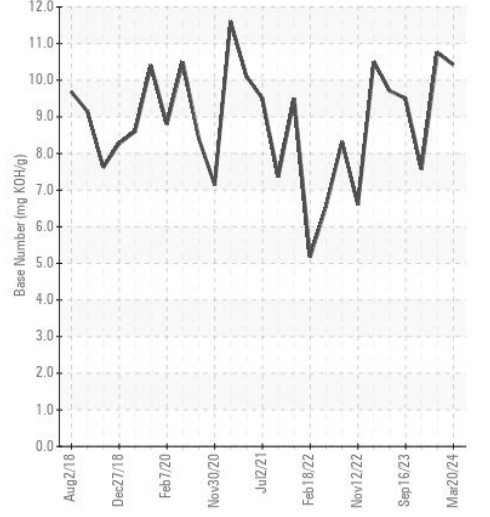
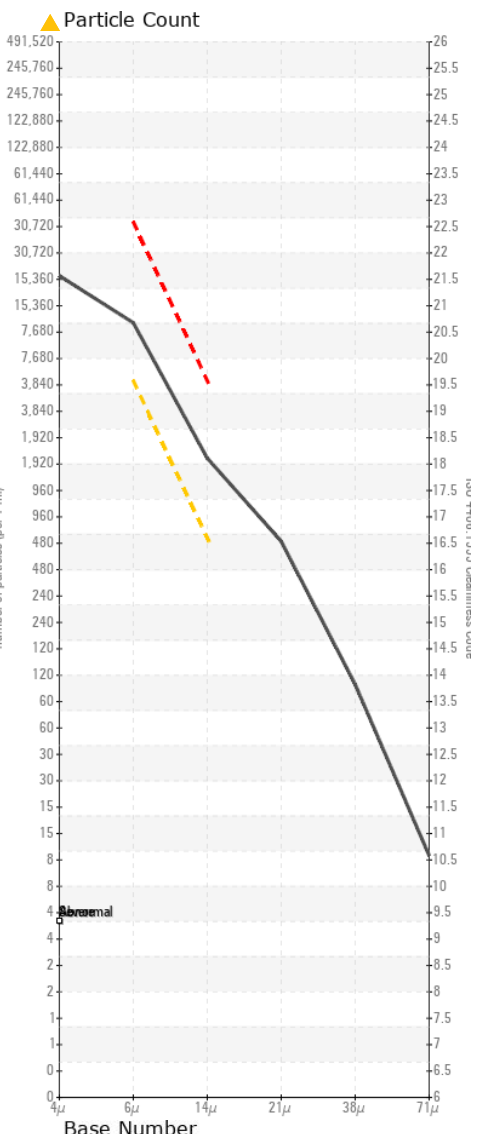
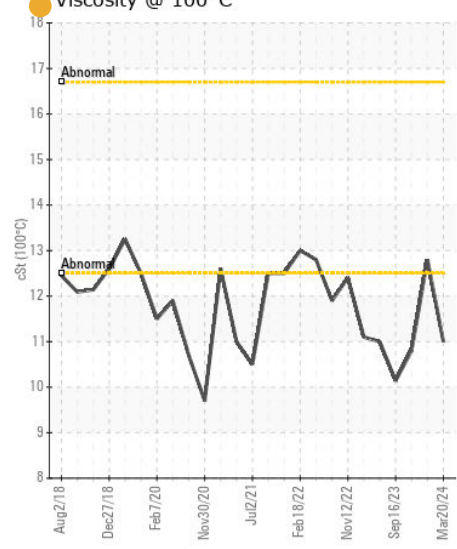
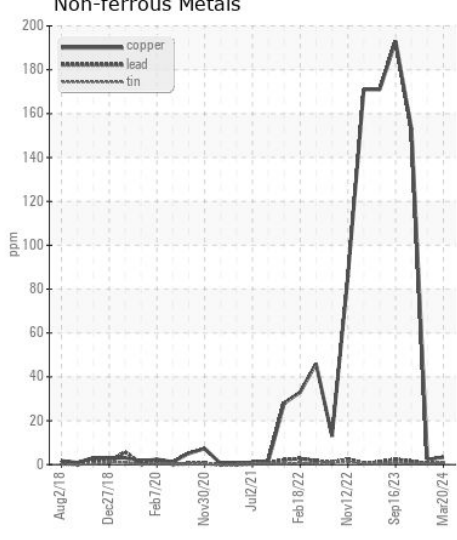
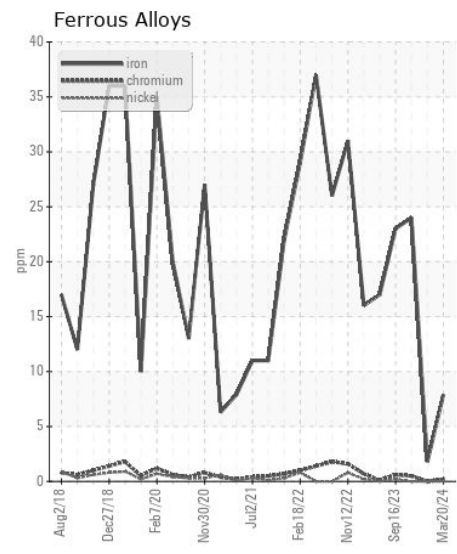
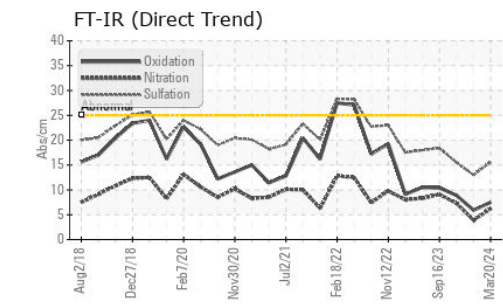
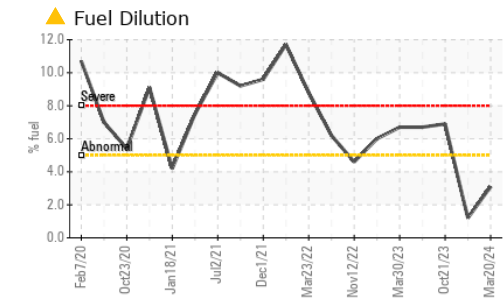
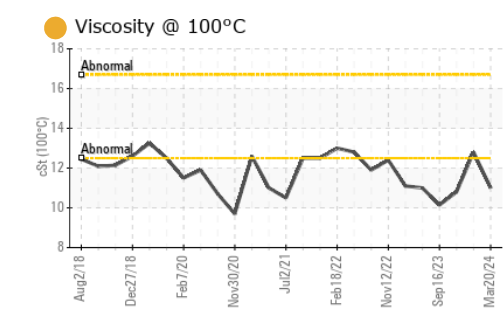
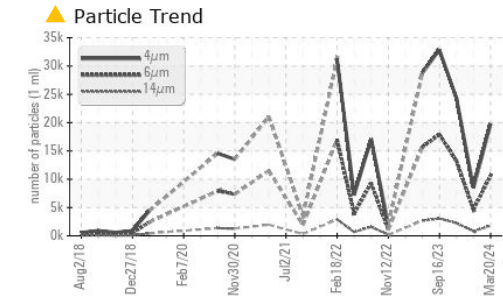
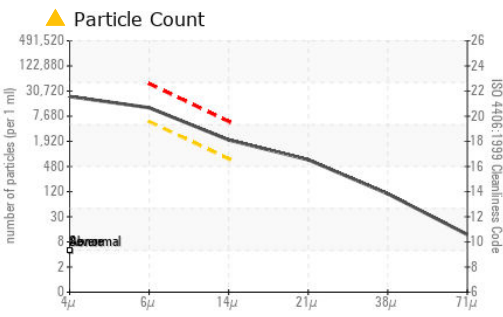
There is a high amount of particulates present in the oil. Light fuel dilution occurring.

| | | | | | | |
|------------------|----------|--------------|--------|----------------|-------|---------|
| Silicon | ppm | ASTM D5185m | >25 | 8 | 8 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 2 |
| Fuel | % | ASTM D3524 | >5 | ▲ 3.1 | 1.2 | ▲ 6.9 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.1 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.2 | 3.9 | 7.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 15.6 | 13.0 | 15.5 |
| Particles >4µm | | ASTM D7647 | | 19754 | 8491 | 24281 |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ 10663 | 4625 | ▲ 13227 |
| Particles >14µm | | ASTM D7647 | >640 | ▲ 1815 | 787 | ▲ 2251 |
| Particles >21µm | | ASTM D7647 | >160 | ▲ 611 | 265 | ▲ 758 |
| Particles >38µm | | ASTM D7647 | >40 | ▲ 94 | 41 | ▲ 117 |
| Particles >71µm | | ASTM D7647 | >10 | 10 | 4 | ▲ 12 |
| Oil Cleanliness | | ISO 4406 (c) | >19/16 | ▲ 21/18 | 19/17 | ▲ 21/18 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| | | | | | | |
|------------------|----------|-------------|-----|---------------|-------|--------|
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 4 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 2 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | 2 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 4 | 6 | 16 |
| Calcium | ppm | ASTM D5185m | | 2663 | 2490 | 2575 |
| Phosphorus | ppm | ASTM D5185m | | 1352 | 1250 | 800 |
| Zinc | ppm | ASTM D5185m | | 1526 | 1492 | 932 |
| Sulfur | ppm | ASTM D5185m | | 3955 | 3116 | 2899 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 7.5 | 5.9 | 8.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 10.42 | 10.75 | 7.57 |
| Visc @ 100°C | cSt | ASTM D445 | | ● 11.0 | 12.8 | ▲ 10.8 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014187 **Received** : 18 Apr 2024
Lab Number : 06153303 **Tested** : 23 Apr 2024
Unique Number : 10983381 **Diagnosed** : 23 Apr 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, PrtCount)
 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

CONOR
 JUAREZ 348
 HERMOSILLO,
 MX 83140
 Contact: EDUARDO GARCIA
 egarcia.comsa@gmail.com
 T: (526)622-1581 x:81
 F: x: